

Section-by-Section Analysis

H.R. 3070, The National Aeronautics and Space Administration Authorization Act of 2005

Sec. 1. Short Title.

The “National Aeronautics and Space Administration Authorization Act of 2005”.

Sec. 2. Findings.

Urges NASA to maintain robust programs in space science, earth science, and aeronautics while it moves forward with plans to send Americans to the Moon, Mars, and beyond.

Sec. 3. Definitions.

TITLE I. – GENERAL PRINCIPLES AND REPORTS

Sec. 101. Responsibilities, Policies, and Plans.

Charges NASA with carrying out a balanced set of programs including programs in human space flight, aeronautics research and development, and scientific research including space and earth science. Encourages NASA to work with entrepreneurs, use commercial services to the extent practicable, and to involve other nations to the extent appropriate.

Directs NASA to carry out the Vision for Space Exploration by striving to return Americans to the Moon no later than 2020, launching a Crew Exploration Vehicle as close to 2010 as possible, and conducting research on the impacts of space on the human body to enable long-duration space exploration.

Requires the President, through the Administrator, to develop a national aeronautics policy to guide NASA’s aeronautics programs through 2020, taking into account several priority areas. Directs the policy be delivered to Congress with the 2007 budget request.

Requires NASA to develop a policy to guide agency space and earth science programs through 2016. Requires the policy to prioritize the agency’s scientific missions and address NASA’s plans on servicing the Hubble Space Telescope. Directs the policy be delivered to Congress with the 2007 budget request.

Requires NASA to develop a plan for managing its facilities, including a description of any facilities NASA intends to build or no longer to use. Directs the plan be delivered to Congress with the 2008 budget request.

Requires NASA to develop a human capital strategy to retain needed employees and ensure that it has a workforce of the appropriate size and with the appropriate skills to carry out programs

and policies of this Act. Limits NASA's flexibility in offering buyouts or subjecting employees to Reductions in Force until 60 days after the plan is submitted with the President's budget for fiscal year 2007, and prohibits any Reduction in Force or other involuntary separations prior to October 1, 2006.

Requires NASA to conduct a study evaluating whether any of its centers should be operated by or with the private sector. Directs the study be delivered to Congress by May 31, 2006.

Directs the President's budget for NASA to include documents showing the requests for human space flight, aeronautics, space science, earth science, safety, microgravity science, education, technology transfer programs, and agency administrative expenses, and comparable figures for each activity for each of the two previous fiscal years.

Requires OSTP to commission an independent review of the Nation's long-term strategic needs for test facilities, and prohibits the closure or mothballing of any facility identified in the 2003 RAND Corporation study entitled "Wind Tunnels and Propulsion Test Facilities: An Assessment of NASA's Capabilities to Serve National Needs," as well as any test facilities in use as of January 1, 2004 until the report is delivered to Congress.

Sec. 102. Reports.

Requires NASA to report certain details regarding the Vision for Space Exploration and for other NASA programs by the end of this fiscal year.

Requires NASA to report estimated costs of the Crew Exploration Vehicle and the impact of those on other agency programs through 2020.

Requires NASA to report its plans for updating the system of space communications and navigation architecture to carry out lunar and deep space missions.

Requires NASA to submit a report to Congress describing its plans to carry out the "awareness campaign" required by the report accompanying the FY 2006 House Science, State, Justice, and Commerce Appropriations Bill.

Requires NASA to develop a transition plan for government and contractor personnel engaged in the Space Shuttle program.

Requires NASA and the Department of Energy jointly to describe their plans to develop a proposed astronomy research mission to study dark energy.

Requires the Director of the Office of Science and Technology Policy (OSTP) to conduct a study to evaluate and list whether any research NASA conducts is unnecessarily duplicating aspects of programs of other Federal agencies or whether it is neglecting areas of research in the national interest related to NASA's mission.

Sec. 103. Baselines and Cost Controls.

Adapts language that currently applies to the Department of Defense to require NASA to report annually on the status (including cost, schedule and performance) of “major” programs. Requires notification to Congress and an internal evaluation of any major program that exceeds its originally estimated development cost by more than 15 percent or exceeds its originally planned schedule by more than six months. Requires Congress to evaluate whether to continue the major program in the event that it exceeds its originally estimated development cost by more than 30 percent or \$1 billion. Defines major programs as those with life-cycle costs of over \$100,000,000.

Sec. 104. Prize Authority.

Gives NASA authority to conduct competitions for cash prizes, modeled after the X-Prize won last year by famed airplane designer Burt Rutan and his SpaceShipOne, to stimulate innovative technology development. Allows NASA to enter into an agreement with a private, non-profit entity to administer prize competitions. Gives NASA the authority to accept private funds and funds from other agencies for cash prizes. Does not limit the amount of a prize, but requires NASA first to report to the Congress before offering any prize worth more than \$10,000,000.

Sec. 105. Foreign Launch Vehicles.

Requires NASA to launch missions on foreign launch vehicles only in accordance with the President’s Space Transportation Policy, announced December 21, 2004. Grandfathers in any mission for which any development has begun prior to the date of enactment, including the James Webb Space Telescope.

Sec. 106. Safety Management.

Amends Sec. 6 of the National Aeronautics and Space Administration Act of 1968 to encourage continued compliance with the CAIB recommendations and to require an annual report, including an evaluation of NASA’s safety management culture.

Sec. 107. Lessons Learned and Best Practices.

Requires NASA to provide an implementation plan within 180 days describing NASA’s approach for sharing lessons learned and best practices for its major programs and projects. Additionally, NASA shall provide incentives for sharing and implementing lessons learned and best practices.

Sec. 108. Commercialization Plan.

Directs NASA, in consultation with other appropriate agencies, to develop a commercialization plan within 180 days to support human missions to the Moon and Mars, low earth orbit activities,

Earth Science missions and applications, and transfer of science research and technology to society.

Sec. 109. Study on the Feasibility of Use of Ground Source

Directs NASA to conduct a feasibility study on the use of ground-source heat pumps for energy conservation in future NASA facilities or major renovations of existing facilities.

TITLE II. AUTHORIZATION OF APPROPRIATIONS

Sec. 201. Structure of Budgetary Accounts

Amends Sec. 313 of the National Aeronautics and Space Act of 1958 such that, starting in FY07, appropriations shall be made in four accounts: ‘Science, Aeronautics, and Education’, ‘Exploration Systems’, ‘Space Operations’, and ‘Inspector General’.

Sec. 202. Fiscal Year 2006

Authorizes NASA at \$16,471,050,000 for FY06, the same amount provided in the House Science, State, Justice and Commerce Appropriations Bill for FY 2005. This amount is approximately \$15 million above the President’s FY 2006 request.

The Authorization includes the following breakdown:

- Science, Aeronautics and Education: \$6,870,250,000, of which
 - \$962,000,000 for Aeronautics;
 - \$150,000,000 for a Hubble Space Telescope Servicing Mission; and
 - \$18,000,000 for Space Grant.
- Exploration Systems: \$3,181,000,000, of which
- Space Operations: \$6,387,300,000
- Inspector General: \$32,400,000

Sec. 203. Fiscal Year 2007

Authorizes NASA at \$16,962,000,000 for FY07, the same as the President’s Projected Budget Request for FY07.

The Authorization includes the following breakdown:

- Science, Aeronautics and Education: \$7,331,600,000, of which
 - \$990,000,000 for Aeronautics;
 - \$18,000,000 for Space Grant.
- Exploration Systems: \$3,589,200,000, of which
- Space Operations: \$6,007,700,000

Inspector General: \$33,500,000

Sec. 204. ISS Research

Requires NASA to allocate at least 15 percent of the funds obligated for ISS Research to research that is not related to human exploration.

Sec. 205. Test Facilities

Requires NASA to establish a policy of charging users of NASA test facilities a competitive price for the costs associated with the use, but as a general rule will not seek to recover the full cost of the facilities operation. Requires a report if the Administrator decides to seek full cost for the use of a facility. Directs NASA to establish a funding account to maintain the viability of test facilities during periods of low utilization.

Sec. 206. Proportionality

Specifies that if the total amounts appropriated in Sec. 202 and 203 is less than the amount authorized in those sections, the amounts authorized under each of the accounts specified will be reduced proportionally.

Sec. 207. Limitations on Authority.

Requires the Administrator to give 30 days notice to Congress before any program can exceed the amount actually authorized for that account in Sec. 202 and 203.

Sec. 208. Notice of Reprogramming

Requires that any reprogramming action that requires notice to the Appropriations Committees, should also require notice to the House Science Committee and the Senate Commerce, Science and Transportation Committee.

Sec. 209. Cost Overruns

Requires NASA to protect funds intended for fundamental and applied research and analysis when reprogramming funds to cover unexpected cost growth within a program.

Sec. 210. Official Representational Fund

Limits the amount of funds to be used for receptions and representational expenses to \$35,000 in any fiscal year.

Sec. 211. International Space Station Cap

Repeals the cost cap on the ISS enacted in the NASA Authorization of 2000.

TITLE III. SCIENCE

SUBTITLE A – General Provisions

Sec. 301. Performance Assessments

Requires the National Academy of Science to evaluate the performance of each discipline within NASA at staggered intervals, but all within six fiscal years.

Sec. 302 Status Report on Hubble Space Telescope Mission

Requires the Administrator to determine, upon completion of the planned return to flight schedule, the schedule for a Hubble servicing mission, unless such mission would compromise astronaut safety. Also requires a report on the status of the Hubble Servicing mission to be submitted not later than 60 days after the landing of the second return to flight mission.

Sec. 303. Independent Assessment of Landsat-NPOESS Integrated Mission.

Requires the Administrator to seek an independent assessment of the costs and risks associated with incorporating the Landsat instrument on the first National Polar Orbiting Environmental Satellite System. Also requires that the Administrator transmit the assessment to Congress within 180 days of enactment.

Sec. 304. Assessment of Science Mission Extensions

Directs the Administrator to carry out termination reviews for extended mission in each of the science disciplines. Specifically requires that a termination review be held within 60 days of enactment for the following missions: FAST, TIMED, Cluster, Wind, Geotail, Polar, TRACE, Ulysses, and Voyager. Also requires that for missions with an operational component, NOAA be consulted and the operational benefits be taken into account in termination reviews. Requires that reports on the assessments must be submitted to Congress within 30 days of completion of the review.

Sec. 305. Microgravity Research

Requires NASA to carry out, to the maximum extent practicable, basic, applied, and commercial research aboard the ISS and that the Administrator submit to Congress, not later than 60 days after enactment, an assessment of microgravity research planned for the ISS.

Sec. 306. Coordination with the National Oceanic and Atmospheric Administration

Requires NASA and the National Oceanic and Atmospheric Administration (NOAA) to coordinate their respective earth science activities to ensure that any technologies developed in NASA's earth science programs can be efficiently transferred to NOAA.

SUBTITLE B – Remote Sensing

Includes the text of H.R. 426, a bill authorizing NASA to establish a pilot program of competitively awarded grants for the use of remote sensing to address state, local, regional, and tribal agency needs.

SUBTITLE C – George E. Brown, Jr. Near –Earth Object Survey

Includes the text of H.R. 1022, a bill authorizing NASA to conduct a Near-Earth Object Survey program to detect, track, catalogue, and characterize certain near-earth asteroids and comets.

TITLE IV – AERONAUTICS

Sec. 411. Policy

Reaffirms that Aeronautics is a core mission of NASA.

SUBTITLE B – NASA Aeronautics Breakthrough Research Initiatives.

Sec. 421 - 423

Lists a number of research areas that NASA should take into consideration when prioritizing Aeronautics Research, including the Environmental Aeronautics Breakthrough Research and Development Initiative, Civil Supersonic Transport Research and Development, and Rotorcraft Research and Development.

SUBTITLE C – Other NASA Aeronautics Research and Development Activities.

Sec. 431 – 440

Lists a number of other research areas that NASA should take into consideration when prioritizing Aeronautics Research, including the Fundamental Research and Technology Base Program, Airspace Systems, Aviation Safety and Security, Zero-Emissions Aircraft, Mars Aircraft, Hypersonics, and Aviation Weather Research.

TITLE V – HUMAN SPACE FLIGHT

Sec. 501. International Space Station Completion.

Requires NASA to ensure that the ISS is capable of diverse microgravity research, supporting a crew of 6 persons, and supporting the docking of the crew exploration vehicle as well as other needed vehicles. Requires NASA to report to Congress on contingency plans for the ISS during periods for which the Shuttle or other systems are not available.

Sec. 502. Human Exploration Priorities.

Requires NASA to construct an exploration architecture and implementation plan and that contains relative priorities that must include development of the CEV, robust crew escape system, and development of a launch system for the CEV.

Sec. 503. GAO Assessment.

Requires the Comptroller General to report to Congress within six months of enactment on NASA's plans for the exploration of the Moon and Mars.

TITLE VI – Other Program Areas

Sec. 601. Orbital Debris.

Requires NASA to take steps to develop or acquire technologies to enable NASA to reduce the risks associated with orbital debris.

Sec. 602. Secondary Payload Capability.

Requires NASA to provide the capability to support secondary payloads on US launch vehicles for satellites or scientific payloads.

SUBTITLE B – Education

Sec. 611. Institutions in NASA’s Minority Institutions Program.

Amends Title III of the VA-HUD Appropriations Act of 1990 to include Historically Black Colleges and Universities that are part B institutions, Hispanic-serving institutions, Tribal Colleges or Universities, Alaskan Native-serving institutions, and Native Hawaiian-serving institutions.

Sec. 612. Program To Expand Distance Learning in Rural Underserved Areas.

Encourages NASA to expand educational outreach programs to rural communities and schools, and gives priority to schools with certain programs.

Sec. 613. Charles “Pete” Conrad Astronomy Awards.

Includes the text of H.R. 1023, a bill to authorize the NASA Administrator to establish an awards program in honor of Charles "Pete" Conrad, astronaut and space scientist, for recognizing the discoveries made by amateur astronomers of asteroids with near-Earth orbit trajectories.

Sec. 614. Review of Education Program.

Requires NASA to arrange with the National Academy of Sciences to conduct a review of NASA’s education programs including funding priorities as well as the quality and effectiveness of the program.

TITLE VII – MISCELLANEOUS AMENDMENTS

Sec. 701. Retrocession of Jurisdiction.

Grants NASA authority it is seeking to give State and local law enforcement officers jurisdiction over NASA-owned research centers to allow them to enforce speeding, drunk driving, and other laws.

Sec. 702. Extension of Indemnification.

Grants NASA an extension it is seeking on an expiring provision in the Space Act of 1958, which allows NASA to indemnify developers of experimental aerospace vehicles with which NASA is involved in a cooperative partnership.

Sec. 703. NASA Scholarships.

Makes technical amendments to the NASA Scholarship program.

Sec. 704. Independent Cost Analysis.

Amends Sec. 301 of the NASA Authorization Act of 2000 by increasing the project cost level which would trigger an independent cost analysis from \$150,000,000 to \$250,000,000 and by requiring the Administrator, rather than the CFO, to conduct the independent cost analysis.

Sec. 705. Limitations on Off-Shore Performance of Contracts for Procurement of Goods and Services.

Limits contractor performance or contracts for procurement of goods and services to domestic entities, as long as it is consistent with all current international agreements.

TITLE VIII - INDEPENDENT COMMISSIONS**Sec. 801. Definitions.****SUBTITLE A – International Space Station Independent Safety Commission.****Sec. 811. Establishment of Commission.**

Requires the President to establish a Commission to assess ISS vulnerabilities within 30 days.

Sec. 812 – Tasks of the Commission.

Requires the Commission to catalog threats and vulnerabilities of the ISS and make recommendations and corrective actions and prepare a report of the public, the Congress and the President within one year of establishment.

SUBTITLE B – Human Space Flight Independent Investigation Commission.**Sec. 821. Establishment of Commission.**

Requires the President to establish a Commission within the legislative branch within seven days of the accident to investigate any accident that results in the loss of a space shuttle, the ISS, and any other US space vehicle carrying humans pursuant to a contract with the federal Government.

Sec. 822. Tasks of the Commission.

Requires the Commission to investigate the incident and determine the cause and all contributing factors, to make recommendations for corrective action, and report to the public, Congress, and the President.

SUBTITLE C – Organization and Operation of Commissions

Sec. 831. Composition of Commissions.

Requires the Commission to consist of 15 members chosen by the President, with four members being nominated by the majority and minority of the House and the Senate Leadership.

Sec. 832. Powers of Commission.

Establishes that the Commission may hold hearings and take testimony as necessary to carry out their charge.

Sec. 833. Public Meetings, Information, and Hearings.

Requires the Commission to hold public hearings to the extent appropriate and release public versions of their report.

Sec. 834. Staff of Commission.

Allows the Commission Chairman to appoint and fix the compensation of staff. The Designates personnel Federal Employees, and allows for non-NASA detailees or consultants to provide services to the Commission.

Sec. 835. Compensation and Travel Expenses.

Sets limits for compensation and travel expenses for members of the Commission.

Sec. 836. Security Clearances for Commission Members and Staff.

Compels the appropriate Federal Agencies or departments to cooperate with the Commission in expeditiously providing appropriate security clearances to the extent possible.

Sec. 837. Reporting Requirements and Termination.

Requires that the Commission produce a final report with all findings, conclusions, and recommendations agreed to by the Commission and any minority views and opinions. The Commission is to be terminated 60 days after the final report is submitted.